REMARKS

This is in full and timely response to the Office Action mailed July 29, 2004, submitted concurrently with a Petition for Extension of Time to within the second extended month. By this amendment, claims 4 and 9 are amended and claims 10-18 are added.

By this Amendment, Applicant believes that all pending claims are in condition for allowance. Reexamination and reconsideration in light of the above amendments and the following remarks is respectfully requested.

Applicant respectfully requests that the Examiner change on the cover sheet of the Office Action the First Named Inventor to Masasuke SAKAI and the filing date to April 1, 2002.

Rejections under 35 U.S.C. §112

Claims 4-9 are rejected under 35 U.S.C. 112, first paragraph, on written description grounds. Applicant respectfully traverses this rejection.

However, in order to expedite prosecution, Applicant has deleted the phrase "*not substantially include lower alcohol*" from claim 4. Applicant wishes to note that the scope of the claims has not been changed since claim 4 is drafted with "consisting essentially of." In other words, trace amounts of ingredients not claimed could appear in the final composition. Support in the specification is clearly present for the inclusion of lower alcohols.

Thus, withdrawal of this rejection is respectfully requested.

Rejections under 35 U.S.C. §103

Claim 4 is rejected under 35 U.S.C. 103(a) as anticipated by Canadian Patent No. 1166374 to Suk. Applicant respectfully traverses this rejection.

The aerosol composition of the Claim 4 is a single-phase propellant-concentrate aerosol composition for use in the spray application of an active ingredient from a pressurized container, consisting essentially of a first component (a) and a second component (b) wherein; component (a) is a concentrate of 10 to 60 wt% of component (a) and component (b) the concentrate consisting essentially of (i) an oil ingredient of 30 to 90 of component (a), (ii) polyol of 5 to 50 wt% of component (a), (iii) water of 1 to 30 wt% of component (a), and (iv) the active ingredient of 0.1 to 20 wt% of component (a); and component (b) is dimethyl ether propellant of 90 to 40 wt% of component (a) and component (b); wherein the component (a) does not have a flash point under 1 atmosphere of pressure, and wherein the

oil ingredient is selected from the group consisting of hydrocarbon, silicone, ester oil and the mixture.

The Examiner maintains his rejection that the composition of the Suk is same as the composition of present invention. However, the aerosol composition of Claim 4 of present invention is different from the aerosol composition of the Suk. Specifically, Suk does not teach or suggest (1) the aerosol composition having the oil ingredient selected from the group consisting of hydrocarbon, silicone, ester oil and the mixture, and (2) the component (a) that does not have a flash point under 1 atmosphere of pressure.

Suk discloses the aerosol composition for water-based paints having film-forming polymer that is water-soluble or water-dilutable polymer forming emulsion with water, such as the acrylic resins, alkyd resins, epoxy ester resins, and polyvinyl copolymers. Also, Suk states that the alkyd resins are modified by natural drying oils, such as liseed oil, soya oil and safflower oil, in concentrations of 30 to 60 % by weight Suk page 5 lines 19 to 24). It is well known that the drying oils polymerize with the oxygen. So, these oils are mixed in the film-forming polymer to fix the alkyd resin onto the object and to quickly dry the film-forming polymer itself.

However, the oil ingredient of Claim 4 does not comprise drying oils and it does not polymerize with the oxygen.

Further, the aerosol composition that comprises the specific rate of oil ingredient, polyol, and water for the concentrate to not have a flash point under 1 atmosphere of pressure is not taught or suggested in the Suk.

Therefore, none of the applied art, alone or in combination, teaches or suggests the features recited in Claim 4.

The aerosol composition of the Claim 11 is a single-phase propellant-concentrate aerosol composition for use in the spray application of an active ingredient from a pressurized container, consisting essentially of a first component (a) and a second component (b), wherein; component (a) is a concentrate of 10 to 35 wt% of component (a) and component (b), the concentrate consisting essentially of (i) an oil ingredient of 30 to 90 of component (a), (ii) polyol of 5 to 50 wt% of component (a), (iii) water of 1 to 30 wt% of component (a), and (iv) the active ingredient of 0.1 to 20 wt% of component (a); and component (b) is dimethyl ether propellant of 90 to 65 wt% of component (a) and component (b); wherein the component (a) does not have a flash point under 1 atmosphere of pressure.

The aerosol composition of the Claim 11 is different from the Suk. Specifically, Suk does not teach or suggest (1) that the component (a) is 10 to 35 wt% and the component (b) is 90 to 65 wt% of component (a) and component (b), and (2) the component (a) that does not have a flash point under 1 atmosphere of pressure. These numbers of component (a) and component (b) are based on the examples shown in tables 7 to 10 of the present application.

Suk discloses the aerosol composition for water-based paints that comprises 6 to 25 % by weight of film-forming polymer and 92 to 75 % by weight of the propellant-solvent, and the propellant-solvent comprises 20 to 75% by weight of dimethyl ether (claim 4 of Suk). However, the aerosol composition of claim 6 of Suk only comprises 20 to 60% by weight of dimethyl ether, further the examples of Suk only comprise 30 to 40% by weight. The aerosol composition of Claim 11 comprises 65 to 90% by weight of dimethyl ether. It is not obvious to precisely point out the mixture of the aerosol composition of Claim 11 from the aerosol composition of the Suk.

Further, the aerosol composition that comprises the specific rate of oil ingredient, polyol, and water for the concentrate to not have a flash point under 1 atmosphere of pressure is not taught or suggested in the Suk.

Therefore, none of the applied art, alone or in combination, teaches or suggests the features recited in Claim 11.

The aerosol composition of the Claim 16 is a single-phase propellant-concentrate aerosol composition for use in the spray application of an active ingredient from a pressurized container, consisting essentially of a first component (a) and a second component (b), wherein; component (a) is a concentrate of 10 to 60 wt% of component (a) and component (b), the concentrate consisting essentially of (i) an oil ingredient of 30 to 90 of component (a), (ii) polyol of 5 to 50 wt% of component (a), (iii) water of 1 to 30 wt% of component (a), and (iv) the active ingredient of 0.1 to 20 wt% of component (a); and component (b) is dimethyl ether propellant of 90 to 40 wt% of component (a) and component (b); wherein the component (a) does not have a flash point under 1 atmosphere of pressure, wherein the active ingredient is an insecticide, and wherein the polyol and water form a hydrophilic liquid combination, and the active ingredient and the oil ingredient form an oleophilic liquid combination, and wherein the hydrophilic liquid combination and the oleophilic liquid combination are separable.

The aerosol composition of Claim 16 is different from the Suk. Specifically, Suk does not teach or suggest (1) that the active ingredient is an insecticide, (2) that the

hydrophilic liquid combination of the polyol and water, and the oleophilic liquid combination of the active ingredient and the oil ingredient are separable, and (3) the component (a) that does not have a flash point under 1 atmosphere of pressure.

Suk discloses the water based aerosol composition having the film-forming polymer with pigment as the active ingredient. However, it does not disclose the aerosol composition having insecticide as the active ingredient. More, if the active ingredient of the Suk which is film-forming polymer, is replaced with the insecticide, the aerosol composition of the Suk with insecticide will not comprises the oil ingredient.

Secondly, the hydrophilic liquid combination and the oleophilic liquid combination separate with each other, after it is sprayed and after dimethyl ether is vaporized. This enhances the insecticidal efficiency because the oleophilic liquid, which includes the insecticide, will only attach to the surface of the insect and penetrate into the insect.

Lastly, the aerosol composition that comprises the specific rate of oil ingredient, polyol, and water for the concentrate to not have a flash point under 1 atmosphere of pressure is not taught or suggested in Suk.

Therefore, none of the applied art, alone or in combination, teaches or suggests the features recited in Claim 16.

Thus, withdrawal of this rejection is respectfully requested.

Claims 4-9 are rejected under 35 U.S.C. 103(a) as allegedly being obvious over WO 96/22686 to Nelson in view of U.S. Patent No. 5,055,299 to Dohara et al. Applicant respectfully traverses this rejection.

To the rejection regarding Nelson, that the examiner alleges (1) applicant is arguing that there is no alcohol, while the application favors alcohol, (2) applicant is arguing that there is no water in the reference, and (3) that the single phase is outside of Nelson '686.

It is respectfully submitted that the examiner's point (1) is irrelevant and point (3) is irrelevant and that the examiner seems to misunderstand the difference between the single phase and the emulsion.

To the statement (2), it is respectfully submitted that the examiner has misunderstood our previous argument in a previously-filed amendment. In the previous argument (page 10 lines 3-5 of the amendment in response to non-final office action), it was claimed that the "Nelson '686 discloses ... Accordingly, Nelson '686 does not satisfy component (C) of claim 4, discussed above." The component (C), discussed above is "the aerosol composition of the concentrate and the propellant form a single phase". However,

examiner seems to misunderstand with (c) "a water of 1 to 40 wt%. The examiner alleges that the applicant argues no water in cited references and required in claim 4." It is respectfully submitted that Applicant did not argue that the Nelson does not favor water. In fact, Nelson does favors water from about 30% to about 70%, which amount is too large.

It is respectfully submitted that the dimethyl ether is an emulsion breaker because it dissolves both with the hydrophilic liquid and oleophilic liquid, and forms single-phase liquid with certain amount of water, polyol, and oil, which is Claim 4, 11 and 16.

The aerosol composition of the Nelson in the example uses hydrocarbon Propellant A-91 (70% propane and 30% isobutene) as a propellant, which do not dissolve with water. It also states in the specification, that the dimethyl ether may be used for the propellant. So, it may be adjustable to change the propellant of the example from Propellant A-91 to dimethyl ether, but this aerosol will comprise only 8 % by weight of the dimethyl ether and 59.910 % by weight of the water, and this aerosol composition will not form single-phase. It will form an emulsion. It is respectfully submitted that Nelson would have to teach or suggest that the amount of water in Nelson can be adjusted to accomplish certain goals. The aerosol composition of Claim 4, 11, and 16 comprises certain amount of oil ingredient, water, polyol, and dimethyl ether to form a single-phase propellant concentrate aerosol composition and not an emulsion. This difference, which is the amount of the water, cannot be adjusted by the artisan.

Lastly, it is respectfully submitted that the difference of the effect between the single phase aerosol composition and the emulsion aerosol composition. The condition of the single-phase aerosol composition is that oleophilic liquid combination and the hydrophilic liquid combination dissolve each other with the existence of dimethyl ether. The condition of the emulsion aerosol composition is that oleophilic liquid or the hydrophilic liquid is dispersed in the solvent, which is either hydrophilic liquid or the oleophilic liquid respectively.

The sprayed particles of the single-phase aerosol composition diffuse longer and further, and are more effective against the sprayed object. It is because the sprayed particles of the single-phase aerosol composition are smaller than the sprayed particles of the emulsion aerosol composition.

Thus, withdrawal of this rejection is respectfully requested.

Conclusion

For the foregoing reasons, all the claims now pending in the present application are believed to be patentable over the prior art of record. Accordingly, favorable reconsideration of the claims in light of the above remarks is courteously solicited. If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the below-listed number.

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Respectfully submitted,

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Enclosures: Amendment Transmittal
Petition for Extension of Time (two months)

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